

Abstract

A simple easy to manufacture analytical device capable of performing membrane based immunoassays on batch of samples within 3 to 10 minutes wherein the method permits focused application of samples, costly labeled immunoassay and signal amplification reagents, said device includes an antibody-immobilized micro porous membrane, breadth corner layer of which is directly attached to a semi-rigid liquid-impervious body with water insoluble adhesive; absorbent body is provided separately and is not attached to analytical device during manufacture, absorbent body is wetted and is placed proximal to the lower surface of the membrane thereby forming networks of capillary channels with the absorbent body; flow of samples or reagents is always kept downwards and focused without application of any force to the absorbent body and the use of disposable adsorbent body permits stepwise addition of signal amplification reagents for ultra sensitive detection of diagnostically important molecules by visual examination of the membrane surface.